

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Currently Amended) A dispatching method for polling device data, comprising the steps of:

reading device type description data, wherein managed devices are sorted according to their types, various types of data of each managed device are sorted to different modules, and a priority attribute and a polling period attribute are assigned to each module respectively;

determining a first set of devices to be polled from the managed devices, wherein the first set of devices at least comprises ~~current~~an operation device set; and

when a system polling is initiated, dispatching a periodical polling by determining at least one module to be polled currently from the first set of devices according to the priority attribute and the polling period attribute of the first set of devices, wherein a first set of data items for describing the at least one module at least comprises a device ID and module ID;

polling the at least one module.

2. (Currently Amended) The method of Claim 1, after determining the at least one module, the method further comprising:

inserting the at least one module to a current polling task queue according to said periodical polling, and polling the at least one module through the current polling task queue;

wherein the first set of data items further comprises task ID, an occupied flag, an activation time and a priority; said activation time is the current time when inserting a task and is updated when a report about executing situation of the task sent from a daemons has been received; said occupied flag is set free after a corresponding message showing the task has been completed is received or the polling task is overtime.

3. (Original) The method of Claim 2, further comprising:

setting a maximum number of polling tasks;

wherein the current polling task queue is generated according to said maximum number of polling tasks.

4. (Currently Amended) The method of Claim 2, further comprising:

setting a polling initiating time for a system;

wherein the periodical polling is implemented based on said polling initiating time plus a polling interval.

5. (Previously Presented) The method of Claim 4, wherein the polling period attribute of a module is a polling interval multiple, equal to multiple of the polling interval.

6. (Previously Presented) The method of Claim 5, further comprising:

before reading device type description data, generating a data structure for describing a device type after sorting managed devices according to their types and

sorting various types of data of each managed device to different modules, wherein a second set of data items for describing the data structure comprises a device type, a module ID, a priority, polling interval multiple and a corresponding daemon ID.

7. (Currently Amended) The method of Claim 6, ~~wherein further comprising~~ providing a third set of data items for describing the first set of devices ~~comprises~~ including a device type and a last polling time; and ~~the method further comprises:~~

determining a second set of devices ~~of which~~ whose connection states need to be detected from the managed devices, wherein the second set of devices at least comprises ~~current~~ a display device set; and

providing a fourth set of data items for describing the second set of devices at least comprises a device ID and a connection state.

8. (Currently Amended) The method of Claim 7, wherein the step of polling the at least one module through the current polling task queue comprises:

a. setting a polling initiating time at the summation of the current time plus a polling interval;

b. determining whether there is a free task in the current polling task queue based on the occupied flag; if so, continuing the process, otherwise returning to step b;

c. selecting a next device module to be polled from the ~~current~~ operation device set; and

d. determining whether the information obtained in step c is Null; if not, assigning a task ID to the selected device module and inserting the task ID into the current polling

task queue, and simultaneously sending a message for initiating the polling of said device module to the corresponding daemon process, then returning to step b; if so, determining whether all tasks in the current polling task queue are in free state, if all tasks are in free state, ending the process, otherwise returning to step b.

9. (Currently Amended) The method of Claim 8, the step of selecting a next device module to be polled from the ~~currently~~ operation device set further comprising:

c1. selecting the next device module;

c2. determining whether $[(\text{the current time} - \text{the last polling time}) / \text{polling interval multiple of the module}]$ is greater than or equal to the system polling interval, if so, continuing the process, otherwise going to step c4; and

c3. determining whether there is a module with higher priority of the same device being polled in the current polling task queue; if so, returning to step c1, otherwise returning the device module information and ending step c; or

c4. determining whether said polling interval multiple is greater than one; if so, returning to step c1, otherwise returning a message of NULL and ending step c.

10. (Previously Presented) The method of Claim 7, further comprising:

selecting sequentially a device from the set consisting of devices whose connection states need to be detected and making ping operation for the device; wherein the success of ping operation shows said device is connected to the network management system and failure of ping operation shows said device is not connected to the network management system; if the connection state of said device is changed, notifying other daemons and foregrounds about this condition.

11. (New) A dispatching method for polling device data, comprising the steps of:

reading device type description data, wherein managed devices are sorted according to their types, various types of data of each managed device are sorted to different modules, and a priority attribute and a polling period attribute are assigned to each module respectively;

determining a first set of devices to be polled from the managed devices, wherein the first set of devices at least comprises an operation device set; and

when a system polling is initiated, dispatching a periodical polling by determining at least one module to be polled currently from the operation device set according to the priority attribute and the polling period attribute of the operation device set, wherein a first set of data items for describing the at least one module comprises a device ID, a module ID, a task ID, an occupied flag, an activation time and a priority;

inserting the at least one module to a current polling task queue according to said periodical polling;

setting a polling initiating time at the summation of the current time plus a polling interval;

determining whether there is a free task in the current polling task queue based on the occupied flag; if so, continuing the process, otherwise returning to the step of determining whether there is a free task;

selecting a next device module to be polled from the operation device set; and

determining whether the information obtained by selecting a next device module to be polled is Null; if not, assigning a task ID to the selected device module and inserting the task ID into the current polling task queue, and simultaneously sending a message for initiating the polling of said device module to the corresponding daemon process, then returning to the step of determining whether there is a free task; if so, determining whether all tasks in the current polling task queue are in free state, if all tasks are in free state, ending the process, otherwise returning to the step of determining whether there is a free task;

wherein said activation time is the current time when inserting a task and is updated when a report about executing situation of the task sent from a daemon has been received; said occupied flag is set free after a corresponding message showing the task has been completed is received or the polling task is overtime.

12. (New) The method of Claim 11, further comprising:

setting a maximum number of polling tasks;

wherein the current polling task queue is generated according to said maximum number of polling tasks.

13. (New) The method of Claim 11, wherein the polling period attribute of a module is a polling interval multiple, equal to multiple of the polling interval.

14. (New) The method of Claim 13, further comprising:

before reading device type description data, generating a data structure for describing a device type after sorting managed devices according to their types and sorting various types of data of each managed device to different modules, wherein a second set of data items for describing the data structure comprises a device type, a module ID, a priority, a polling interval multiple and a corresponding daemon ID.

15. (New) The method of Claim 14, further comprising providing a third set of data items for describing the first set of devices comprises a device type and a last polling time;

determining a second set of devices whose connection states need to be detected from the managed devices, wherein the second set of devices at least comprises a display device set; and

providing a fourth set of data items for describing the second set of devices at least comprises a device ID and a connection state.

16. (New) The method of Claim 11, wherein the step of selecting a next device module to be polled from the operation device set further comprises:

c1. selecting the next device module;

c2. determining whether $[(\text{the current time} - \text{the last polling time}) / \text{polling interval multiple of the module}]$ is greater than or equal to the system polling interval, if so, continuing the process, otherwise going to step c4; and

c3. determining whether there is a module with higher priority of the same device being polled in the current polling task queue; if so, returning to step c1, otherwise

returning the device module information and ending the step of selecting a next device module to be polled from the operation device set; or

c4. determining whether said polling interval multiple is greater than one; if so, returning to step c1, otherwise returning a message of NULL and ending the step of selecting a next device module to be polled from the operation device set.

17. (New) The method of Claim 15, further comprising:

selecting sequentially a device from the set consisting of devices whose connection states need to be detected and making ping operation for the device; wherein the success of ping operation shows said device is connected to the network management system and failure of ping operation shows said device is not connected to the network management system; if the connection state of said device is changed, notifying other daemons and foregrounds about this condition.